CLAIMS

What is claimed is:

1.   A method of receiving RF signal quality information comprising the steps of:

at a first station, receiving a plurality of probe responses over a channel;

determining a current transmit rate of the probe responses;

synchronizing signal processing to the current transmit rate of the probe responses; and

processing the probe responses to determine at least one of a signal quality of the channel and a transmission protocol being used over the channel;

wherein the probe responses are transmitted in reply to probe requests generated by a second station.

2.   The method of claim 1, further comprising the step of the first station generating a probe request responsive to failing to receive a probe response for a predetermined period of time.

3.   The method of claim 1, said synchronizing step further comprising the step of the first station delaying a start of channel monitoring.

4.   A method for providing RF signal quality information comprising the steps of:

from a probe request generator, monitoring a channel for probe requests being transmitted by a station;

determining a time period between successive probe request transmissions from the station; and

from the probe request generator, transmitting a series of probe requests having the determined time period between successive probe request transmissions;

wherein the series of probe requests signal an access point to transmit probe responses which are detectable by the station.

5.   The method of claim 4, further comprising the steps of:

halting the transmission of probe requests from the probe request generator;

from the probe request generator, monitoring the channel for additional probe requests transmitted from stations other than the probe request generator; and

continuing the transmission of probe requests from the probe request generator upon detection of additional probe requests.

6.   The method of claim 4, wherein said determining a time period step further comprises the step of storing a time value correlating to each of the probe requests.

7.   The method of claim 4, further comprising the steps of halting the transmission of probe requests from the station.

8.   The method of claim 4, wherein said determining a time period step further comprises the steps of:

parsing each of the probe requests;

storing a medium access control address associated with each of the probe requests; and

identifying the successive probe request transmissions from a particular station with the medium access control address.

9.   The method of claim 4, further comprising the steps of:

from the probe request generator, monitoring the channel for probe requests being transmitted by a second station;

determining a second time period between successive probe request transmissions from the second station; and

from the probe request generator, transmitting a second series of probe requests having the second determined time period between successive probe request transmissions;

wherein the second series of probe requests signal the access point to transmit probe responses which are detectable by the second station.

10.   A method for providing RF signal quality information comprising the steps of:

from a probe request generator, monitoring a channel for probe responses being transmitted by an access point;

determining a time period between successive probe response transmissions; and

from the probe request generator, transmitting a plurality of probe requests having the determined time period between successive probe response transmissions;

wherein the probe requests transmitted from the probe request generator signal an access point to transmit probe responses which are detectable by a station.

11.   The method of claim 10, further comprising the steps of:

halting the transmission of probe requests from the probe request generator;

from the probe request generator, monitoring the channel for additional probe responses; and

continuing the transmission of probe requests from the probe request generator upon detection of additional probe responses.

12.   The method of claim 10, wherein said determining the time period step further comprises the step of storing a time value correlating to each of the probe responses.

13.   A device for generating probe requests comprising:

a probe request processor which receives probe requests generated by a station and determines a time period between successive probe requests that are received from the station;

a probe request timing database which stores time stamps associated with the probe requests; and

a probe request scheduler which schedules probe request transmissions at intervals correlating to the determined time period between the received probe requests;

wherein the probe request transmissions signal an access point to transmit probe responses which are detectable by the station.

14.   The device for generating probe requests of claim 13, further comprising at least one probe request timer, said probe request timer operatively communicating with said probe request schedule and timing the probe request transmissions.

15.   The device for generating probe requests of claim 13, further comprising a clock, said clock operatively communicating with said probe request processor to provide a current time value for each of the received probe requests.

16.   The device for generating probe requests of claim 13, further comprising:

a radio for transmitting and receiving RF signals containing probe requests;

a baseband processor operatively coupled to said radio; and

a medium access controller operatively coupled to said baseband processor.

17.   A system for synchronizing a radio transceiver to a wireless local area network, comprising:

a first receiver for receiving a plurality of probe responses over a channel in response to at least one probe request;

a processor in the radio transceiver programmed to:

initiate a probe request if no probe responses are detected at the first receiver;

stop further probe requests if probe responses in response to probe requests from another device are received at the radio receiver; and

synchronize to at least one among probe requests from another device and probe responses in response to probe requests from another device.

18.   The system of claim 17, wherein the plurality of probe responses are transmitted to the radio receiver from a wireless access point.